

Head - Neck

Practical

Bones

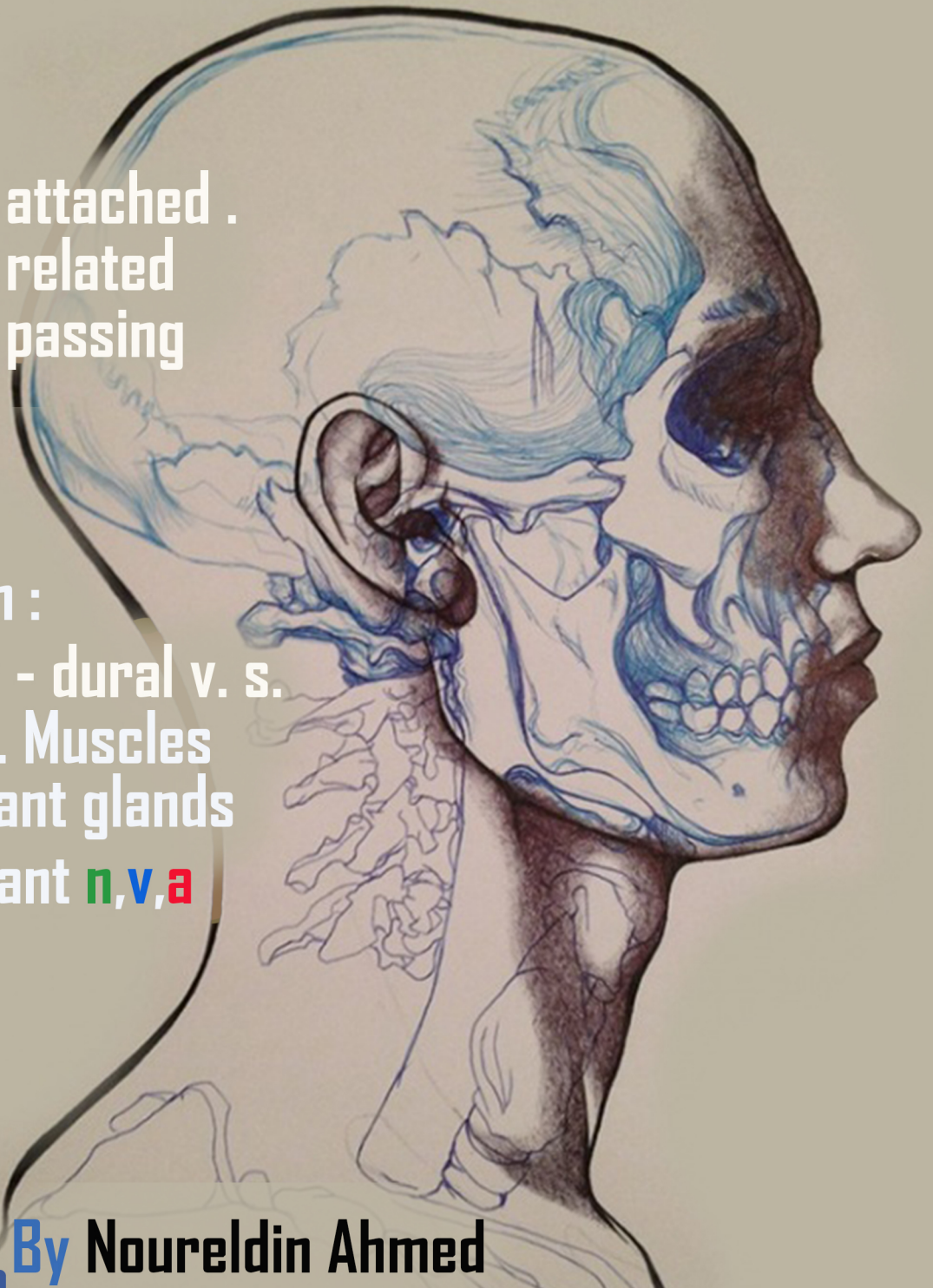
scheme
structure attached .
structure related
structure passing

Fleshy

scheme

Questions on :

dural folds - dural v. s.
the import. Muscles
the important glands
the important **n,v,a**



By **Noureldin Ahmed**



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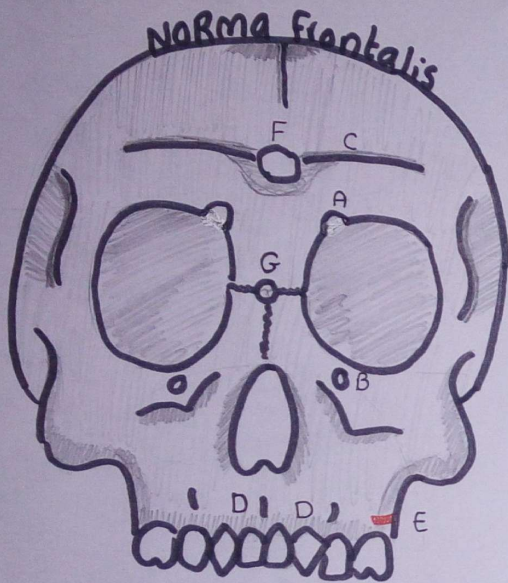
VISIT...

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1

Bone

Foramina + fissures
structure attached and Related



E alveolar margin of maxilla opposite upper 3 molar teeth.

G Optic foramina

optic N
ophthalmic A

A Supra orbital notch:

Supra orbital N
Supra orbital A, V

B Infra orbital foramin:

Infraorbital N
Infra orbital A, V

C Superciliary arch:

Related to frontal Air sinus.

D incisive fossa:

origin of orbicularis oris.

E origin of Buccinator.

F Glabella.

G Nasion.

H ant. nasal spine.

F Inferior orbital fissure:

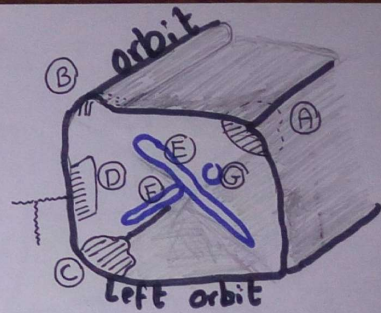
M I Z O

maxillary N → inf. orb. N

Infra orbital A, V

zygomatic N

• orbital Br of sphenopalat. G.



A Lateral و فوق
Lacrimal Gland

B medial و فوق
Trochlea.

C medial و تحت
Lacrimal sac

D medial و خلف
origin of orbicularis oculi

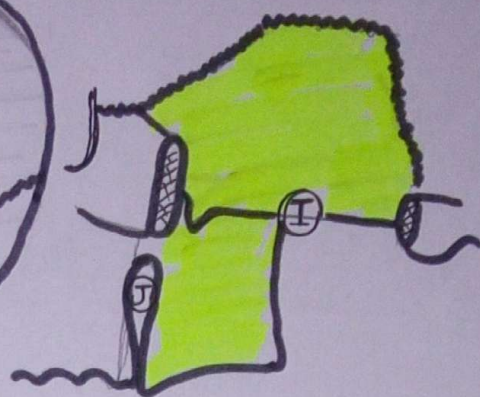
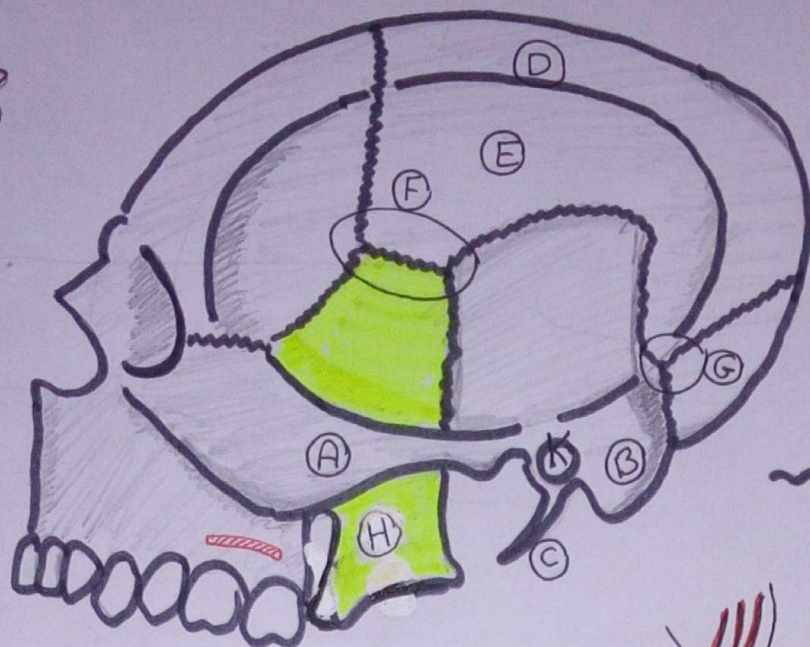
E Superior orbital fissure:

• Lacrimal N
• Nasociliary N
• Frontal N

• Sup. divis. of oculomot. N
• inf. divis. of ~ N

• trochlear N
• Abducent N
• ophthalmic V

2



(A) zygomatic Arch :

■ Bony forming?

Temporal Process of Zyg. Bone.
+ Zygomatic Process of temp. Bone.

■ Structure attached?

- upper Border → Temporal fascia.
- Lower Border → O of masseter.
- Ant. Surface → investing deep F.
- Root → Lat. T.M. Ligament.

■ structure related?

- Deep : [crossing]
Temporalis Tendon
- 2 Deep temporal N, A, V.
- Superficial : [crossing]
Auriculo temporal
Superficial temp. A, V.
- [Temporal Br of Facial N
Zygomatic Br of Facial N

○ vessels Related:

Transverse Fascial (Below).
zygomatic-orbital (above).

(F) Pterion [sphenoidal fontanelle]

■ Bony forming → 4 [F-P-S-T]

■ structure related?

Ant Br of M.M.A. related to its inner.

(B) mastoid process :

■ structure attached?

○ outside : SSL

- 1 sterno mastoid i
- 2 Splenius Capitis i
- 3 Longissimus Capitis i

○ Deep :

Post belly of Dig. D

"Digastric notch"

occipit. A 1 Groove & notch 1 2 3

(C) styloid process :

■ structure attached?

• origin of 3 muscles:

- 1 stylo Hyoid.
- 2 stylo pharyngeus.
- 3 stylo glossus.

• attachment 2 Ligaments:

- 1 stylo hyoid Lig.
- 2 stylo mandib. Lig.

(D) Superior temporal line :

Gives attached to 2 structure :

- 1 epicranial aponeurosis.
- 2 Temporal fascia.

(E) Temporal fossa + J.T. Line :

Gives origin to Temporalis ms.

③ Asterion (mastoid fontanelle):

■ Bony forming? 3 [T - P - O]

■ structure Related? (inner)

Highest point of transverse sinus

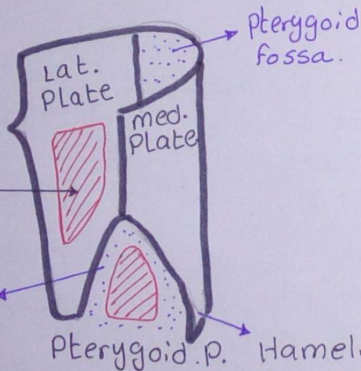
④ lat. surface of lat. pterygoid plate:

Lower Head of Lateral pterygoid O

But med. surface Deep Head of med. p. O

⑤ Infratemporal of Greater wing of sphenoid.
+ ~ crest.

Upper Head of lateral pterygoid O

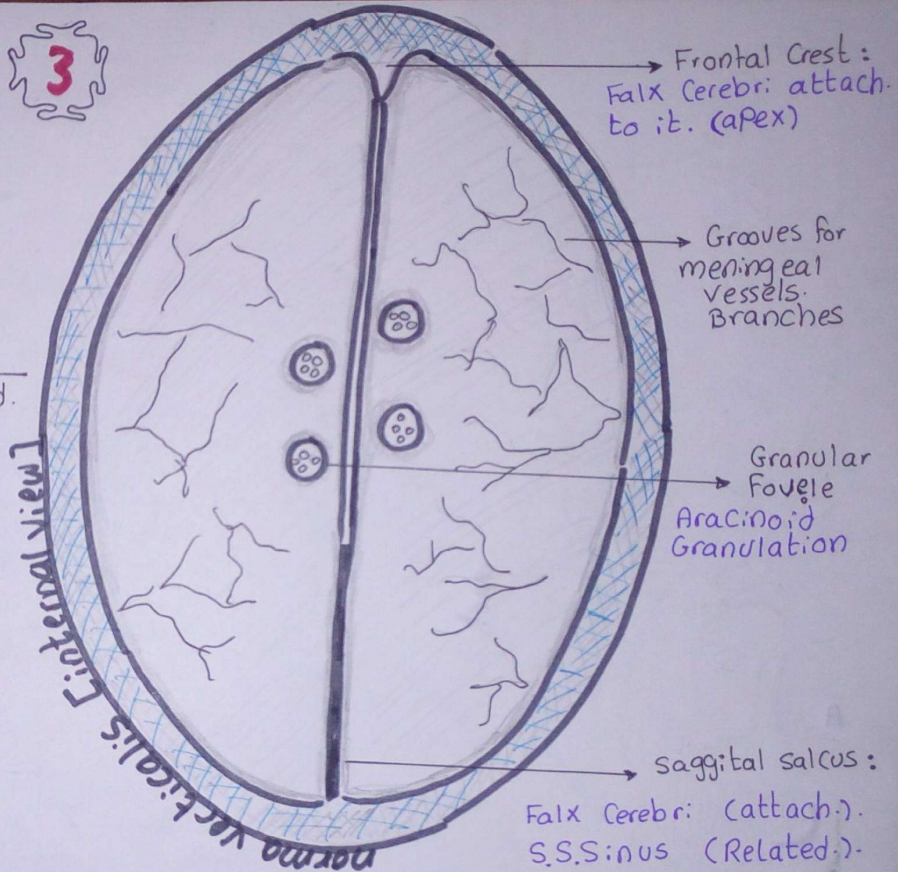


scaphoid Fossa:
origin of
Tensor Palati ms

Pterygoid p. Hamulus
Pterygo mand. lig.
raphae

P. P. Fossa
⑥ Pterygo maxillary fissure: maxillary A, N.

3



⑦ external Auditory meatus:
Gives attach. to Cartilage Part of meatus.

4



Foramina : scheme

* يصح على Pteryg. Proc. فتلاقى
Later. ليه 2 فورامنا :

① الأبيقة (Ovale) ② الصغيرة (Spinosa)

* خذ خط من styloid proc. لثايه

Post. nasal spine

فتلاقى على الخط دا 3 فورامنا :

والله فيها مسرع

من قدام لورا

① Lacerum (ملفأش شكل)
② Carotid (عامله زى النفق)
③ Jugular (كبيرة وعنته)

* بين styloid واد mastoid

من stylo mastoid F.

* تحت occipital Condyle من

قدام Hypogloss. Canal

ورا Post Condyl. Canal

④ Foramin ovale : 5

3 MALE ♂

mandibular N

motor Root of trigeminal N

middle mening. v.

Accessory meningial A

Lesser Super. Petrosal N

Pterygoid Plexus → Emmissary V → Cavernous S.

⑤ Foramin Spinosum :

- 1 Middle mening A
- 2 Nervous spinosus.

⑥ stylo mastoid Foramin :

- 1 Fa Cial N
- 2 stylo mastoid A

⑦ Foramin Lacerum :

- 1 mening. Br of ascending pharyngeal A.
- 2 Emmissary v.

F. ovale عكس

⑧ Carotid Canal :

- 1 internal Carotid A.
- 2 ~ ~ Symp. plex.
- 3 plexus of vein
- 4 deep Petrosal N

⑨ Jugular Foramin :

- 1 Internal Jugular v.
- 2 Inferior petros. sinus
- 3 IX, X, XI Cranial N

⑩ Ant Condylar Foramin :
Hypoglossal Canal.

- 1 Hypoglossal XII N
- 2 mening Br Asc ph. A
- 3 emmissary v.

⑪ Post. Condyl. Foramin :
Emmissary vein

⑫ Foramin magnum :

⑬ nervous structure

- 1 Lower End of medulla
- 2 tonsils of Cerebellum
- 3 spinal root of access-N

⑭ vascular structure

- 1 vertebral A
- 2 spinal A
- 3 vertebral plexus v.

⑮ membranous st.

- 1 meninges.
- 2 membrana tectoria.
- 3 Apical lig.

⑯ Incisive fossa :

Greater palatine A, v.
nasopalatine n

⑰ G. palatine fossa :

Greater palatine A, v.
~ ~ n

⑱ L. palatine fossa :

Lesser palatine A, v.
~ ~ n

④ Maxillary tuberosity:
Gives attach. to Superf.
Head of medial pterygoid.

⑤ Post. nasal spine:
musculus uvulae

⑥ apex of Petrous temp. Bone:
Levator palati. ms.

⑦ pharyngeal tubercle:
Pharyngeobasilar fascia
sup. Const. of pharynx.

⑧ occipital Condyle:
atlas →
atlanto occipital J
Sagittal
ellipsoid synovial

⑨ Free Border of Hard palate:
Palatine Aponeurosis.

• what's type of TM Joint?
Condylar synovial joint

⑩ sphenoid spine:
sphenomandibular lig.

⑪ Highest nuchal line:
- epicranial aponeurosis.
- occipital belly of O.F. ms.

⑫ ext. occipital protuberance:
+ med. part of sup. nuch. line
Trapezius muscle 0

⑬ external occipital protuberance:
+ ~ ~ crest
Ligamentum nuchae

⑭ lat part of sup. nuchal line:
+ outer surf. of mastoid
Sternomastoid ms.

⑮ Semispinalis Capitis.

⑯ superior oblique ms.

⑰ Rectus Capitis major.

Last Rectus Capitis Minor.

[A] Prema:

It called at Birth
Ant. Fontanelle w ossificate
After 18 month.

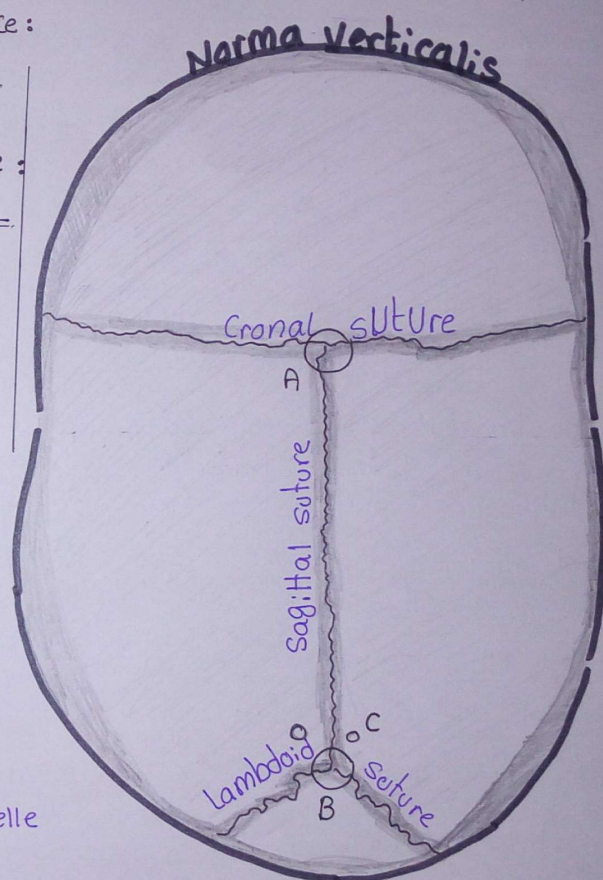
[B] Lambda:

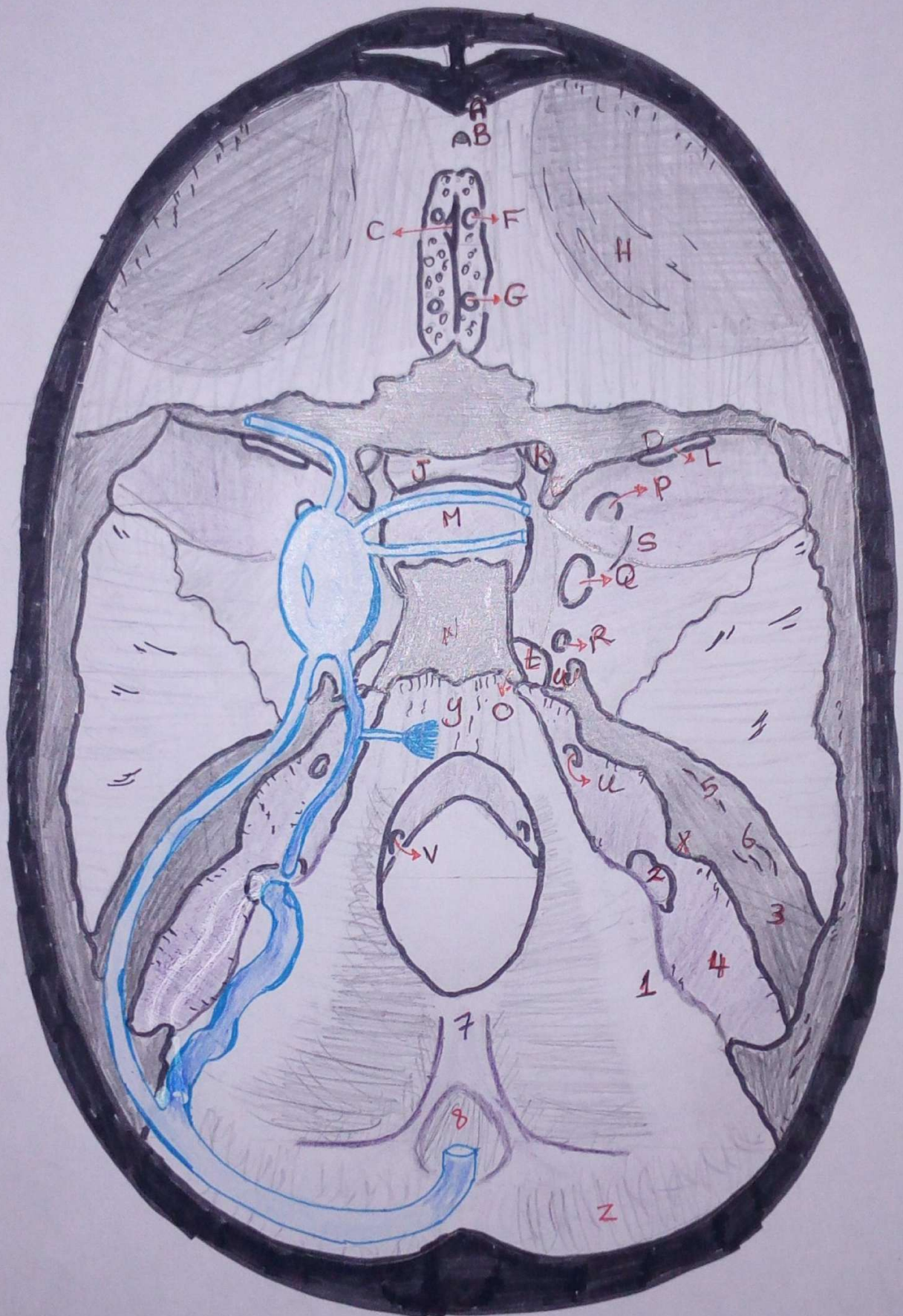
It called at birth Post. Fontanelle
w ossificate After 6 month

[C] Parietal Emessary

Contain emessary v w Connect scalp veins & sss.

5





(A) Frontal Crest :

Gives attach. for apex of falx cerebri.

(B) Foramen cecum :

Contain Emissary vein connect. bet. SSS and nasal veins.

(C) Crista galli :

Gives attachment of apex of falx cerebri.

(D) Lesser wing of sphenoid :

- has Groove for sphenoparietal sinus.

(E) ant. clinoid process :

Gives attach. to the free border of tentorium cerebri.

(F) ant. ethmoidal foramen :

transmit ant. ethmoidal N, A, V.

(G) post. ethmoidal foramen :

transmit post. ethmoidal N, A, V.

olfactory - Cr. pr. form P. مكنة القول

(H) orbital plate of frontal bone.

بطش كيره

(I) tuberculum cili :

(J) Sulcus chiasmatica :
related to optic chiasma

(K) optic canal : see page 1

(L) sup. orbit. fiss. : see page 1

(M) Hypophysial fossa :
it lodges pituitary Gland



(N) Dorsum cili :

(O) Post. clinoid process :

Gives attach. to ant. end of att. margin of tentorium cerebri.

(P) Foramen Rotundum :
maxillary N

(Q) Foramen ovale : see page 3

(R) Foramen spinosum : see page 3

(S) Groove for MMA :

(T) Foramen lacerum : see page 3

(U) internal auditory meatus :

- 1 Facial
- 2 vestibulo cochlear
- 3 internal auditory A.
- 4 ~ ~ ~ V.

(V) Hypoglossal canal : see page 3

(W) Trigeminal impression :
Lodges the trigeminal ganglion.

(X) upper border of petrous temp. bone :

* Gives attach. for attach. border of tentor. cereb. + * Related to sup. petros. S.

(Y) Clinoid :

Related to Basilar plexus of sinuses.

(Z) Transverse sulcus :

Related to transverse sinus

(1) Sigmoid sulcus :

Related to sigmoid sinus

(2) Jugular foramen :

see page 3

(3) sup. Petrosal sulcus :

Related to sup. Petrosal sinus

(4) inf. Petrosal sulcus :

Related to inf. Petrosal sinus

(5) acute eminence :

Related to inner ear

(6) tegmen tympani :

Related to middle ear

(7) internal occipital crest :

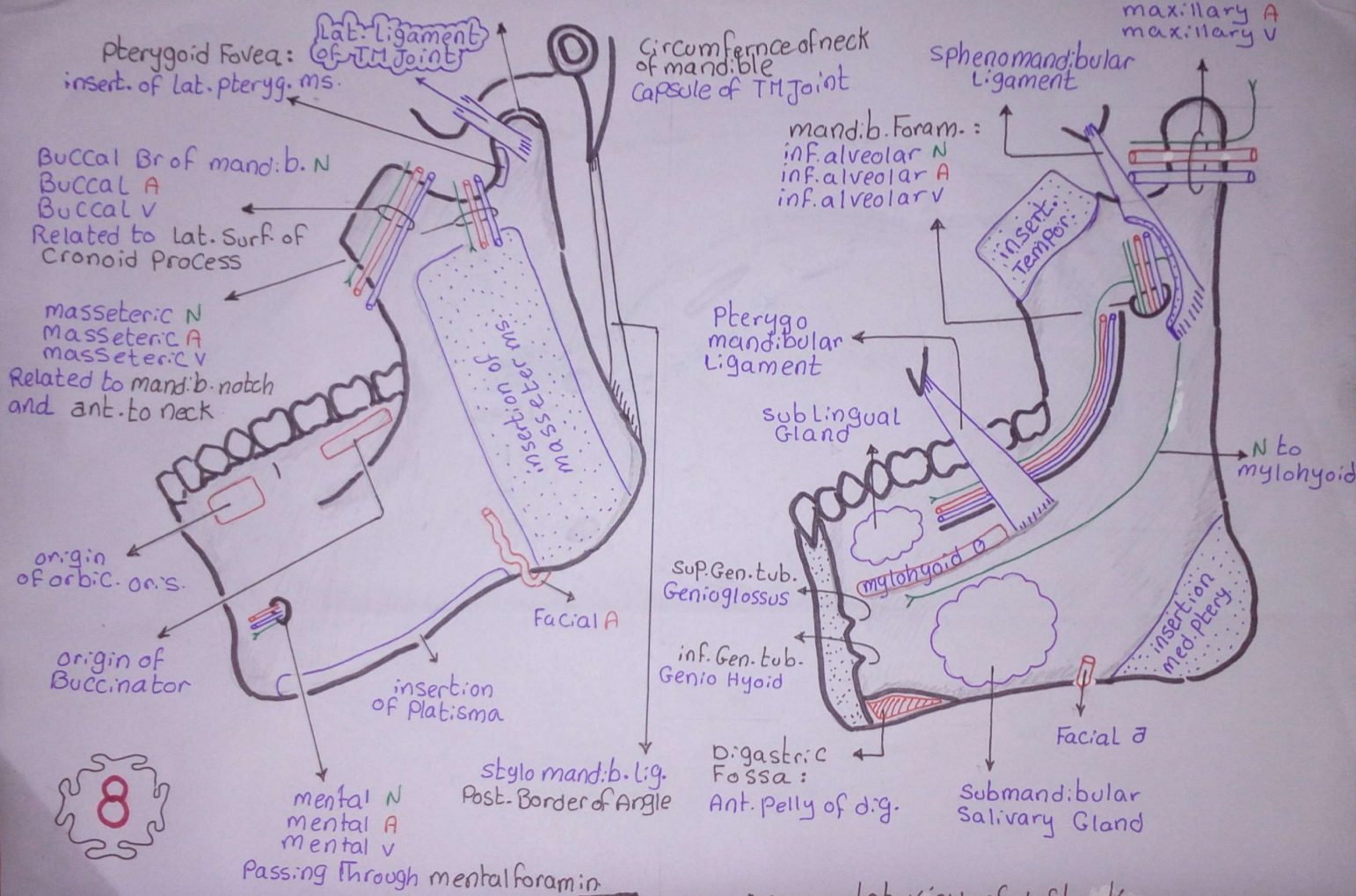
* Gives attach. falx cerebelli + * Related to occip. v. S.

(8) internal occipital protuberance

Related to confluence of sinuses



The Condyle: TM Joint "Condylar synovial"



The mandible

Lat. view of left 1/2
 med. view of Right 1/2

Cervical vertebrae

ATYPICAL

Typical

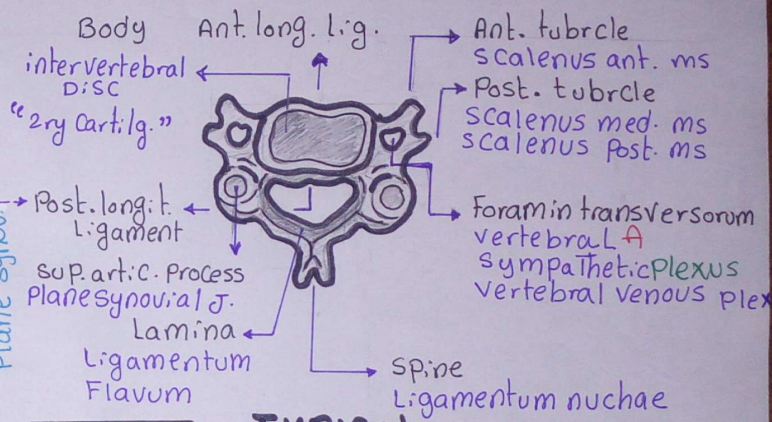
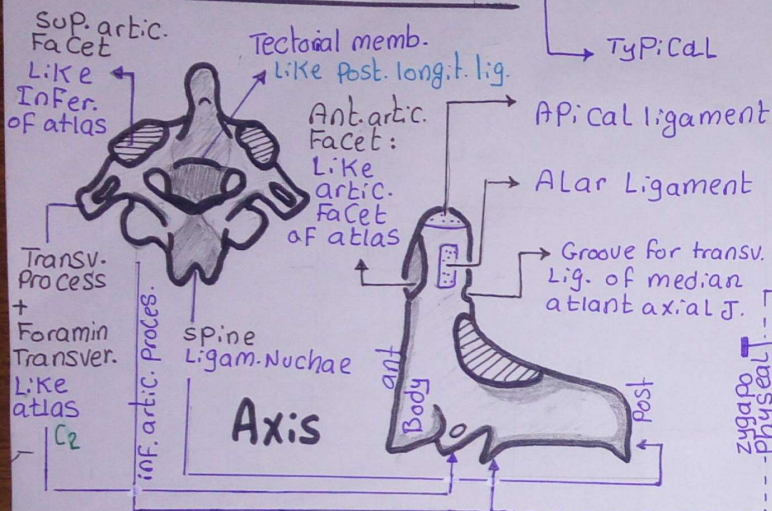
C₁ atlas
C₂ axis
C₇
C₃-C₄-C₅-C₆

Ring like structure

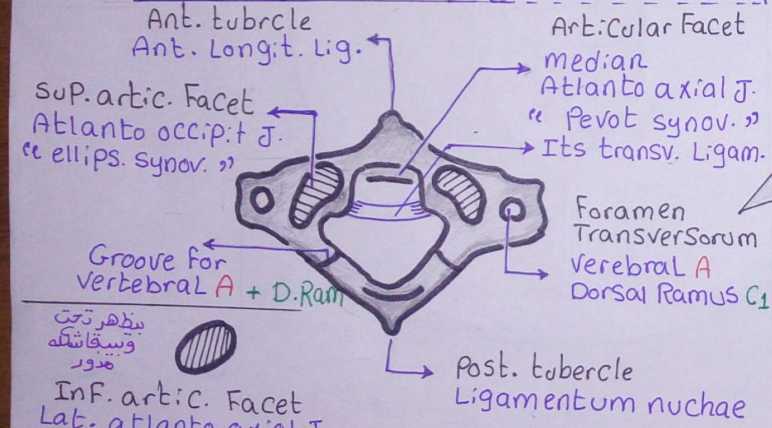
Have odontoid process (upward).

Like typical But spine not bifid.

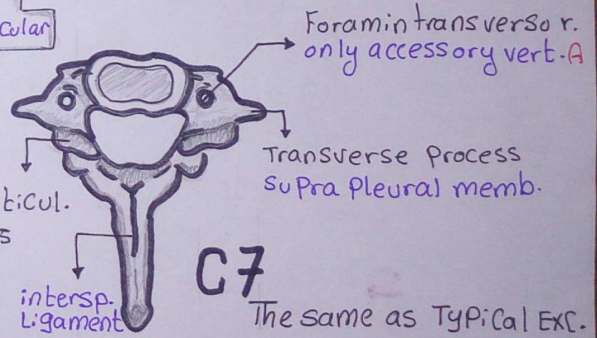
Have bifid spine.



TYPICAL C₃-C₆



Atlas
Ant - post Have art. C. Facet
Sup - inf Kidney shape Circular Facet

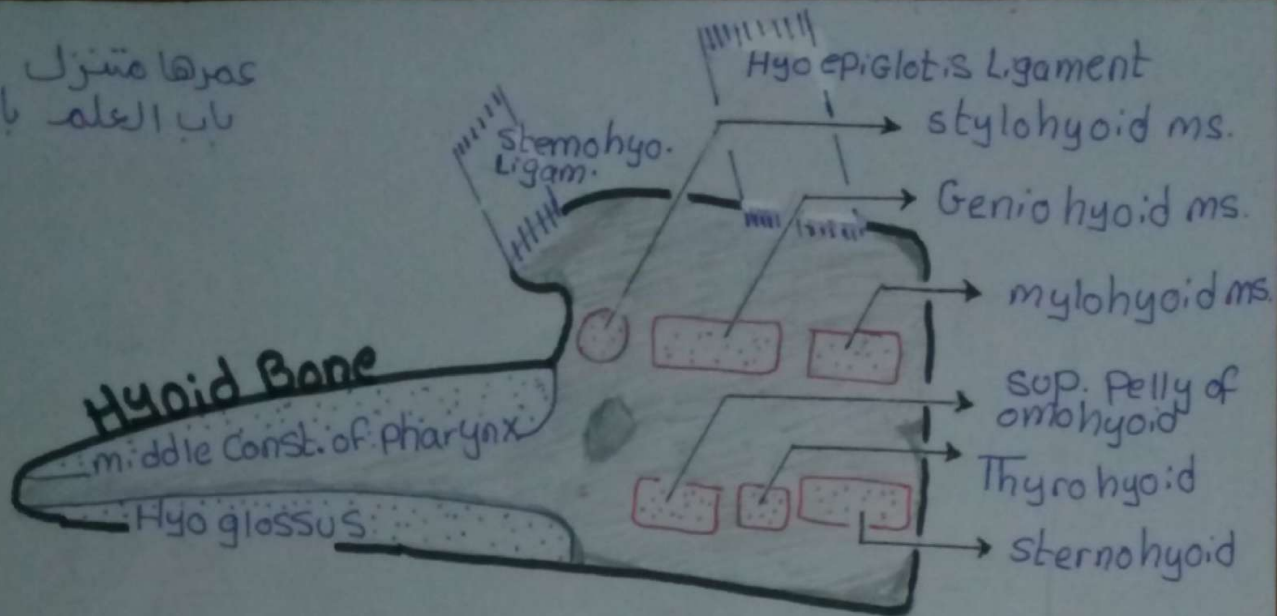


The same as typical exc.

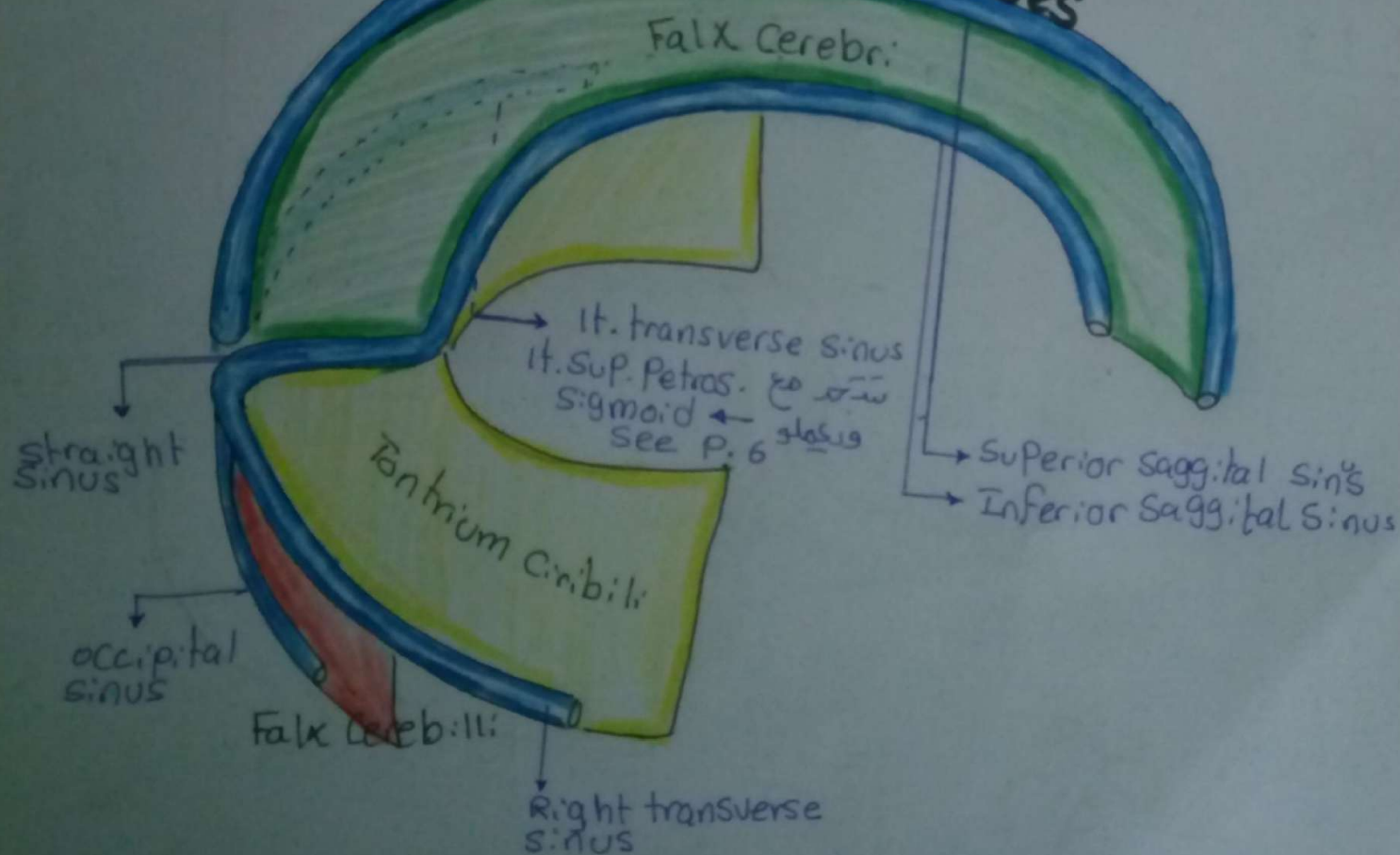
Atlas Formed of 2 lateral masses 2 Arches ant post

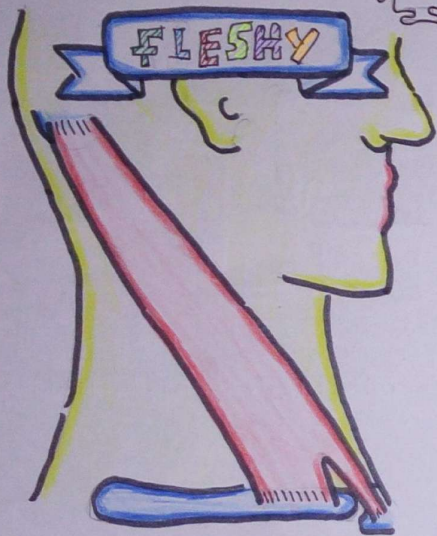


عمرها منزل بس من
باب العلم بالشئ

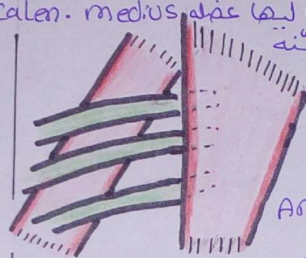


Dural Folds + Sinuses





③ قفشت ال Plexus :
 - كما يبقا Super. ليها عطفه scal. ant. وهلاقيها
 مرتبة على قدام شوية
 - و يبقا Deep ليها عطفه scalen. medius
 ومديه على ورا شية



ويكدا يبقا
 Post. A
 ونخس على Ant. A

④ البوصلة تباتت في
 « Ant. A » هه عضله digastric
 ادور عليها بتتق باينه هيا وال tendon تاعها
 ابقوا عطفه كذا ماسكة من عند mandib. ble
 لغاية ال styloid P. عكها كذا
 ⑤ اللغوت ال digastric هو ال digastric
 ادور فيه على submand. G.

ويكدا ال d. gast. خلص نخس بقا
 تحت d. gastric عند ال Carotid A
 من ال Carotid A هميش من Superf. ال
 deep :

• هلاقي اول حاجه
 ال Comm. C. A ووراه Int. Jug. v
 ونخس نفقشهم في Carotid sheath مع
 بعقت .. السفله ⑥
 * بالنسبة لـ C. C. A هلاقيها قدام وكمات
 مشرق لغرين كبار Int. ⑥ Ext.
 * اما ال IJV فدا مايشن لورا وهلاقيها
 collapsed عامل في لورقه.

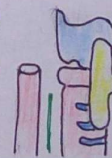


اهلاقيها
 Int. C. A. ال (نقطة)
 E. C. A. عن
 Int. C. A. ملهوش Br تتشاف
 من ال neck
 [خلاصانه بشيا 4]

• هيشل CCA و IJV هلاقي تحتهم
 يرفان « (ذي عصبان) ماشين بالطول :
 ① طويل ورفيع من فوق ورفيع تحت و Superf. Vagus
 ② قصير ورفيع من تحت ولفين من فوق و Deep symp. chain

كل ال فات دنا عن Post. lab. يتبع ال neck

اكن لو وصينا على ال neck من
 قدام هلاقي
 Thyroid art. و تحتها
 Thyroid G. ووراهها
 Trachia ووراهها
 esophagus
 recurrent L. N



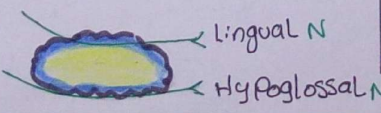
بالنسبة لـ « Head » في الفلشن فهو مشني
 محتاج اسكيمه هه مجرد اساله هتقولها بعد ما نقول
 الاسكيمه .

• لمب بين الاسكيمه دي للـ neck ومفتاح :
 ال neck هه عضله sternomastoid وسهل
 جدا انه تعرفها حتى لومقطوه لانها العطفه الوحيدة
 ال ماسكة من mastoid ورايه قدام ولتحت .

① قفشت ال stern. m. كذا بيقا لي قدامها Ant. A
 ولي وراها Post. A خليها في Post. A دلوقت .

③ هنخس ال post. A للاق زجه [مكة] ودور على
 Brachial plexus .

⑦ ذي عصب متعلق على submand. G. ويزق
 من فوق وعامل hocking Lingual N
 من تحت وعامل hocking Hypoglossal N
 مفيش اعصاب تانية عامله hocking من
 ال neck غير :
 ① - inf. alveol. وادام ال mandib. ble
 ② - sp. n. ACC ودا مش بيتشاف
 هلاقي لانه ورا Trapezius



وبيرا
 تخسها
 الاسكيمه

The most Important Q on Fleshy

1

muscles

- العضلات دي لازم بتعرف عنهم
- origin.
 - insertion.
 - N. supply.
 - Action.
- 1 Sternomastoid.
 - 2 Digastric.
 - 3 masseter.
 - 4 Buccinator.
 - 5 Temporalis.
 - 6 Scalenus ant.
 - 7 Scalenus med.
 - 8 Sternohyoid.
 - 9 Sternothyroid.
- بس هكتك بعينه كاشه معيه جذاً في العضلات دي

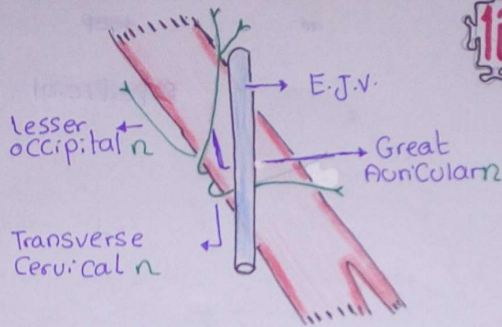
Sternomastoid

- It's ① supply:
- sensation (proprioceptive) By C₂, C₃.
 - motor By Accessory spinal n

Structure Superf. to it:

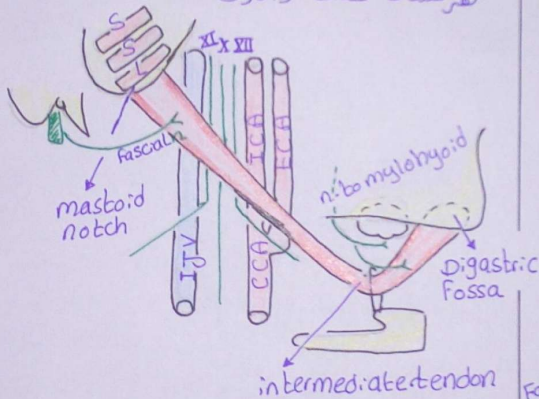
- skin, Superf. fascia Cont E.J.V.
- Deep Fascia containing Platysma.

nerves - veins related to it:



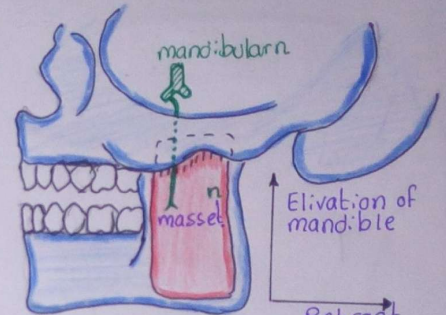
Digastric

هرسمها كلها وأمرى لله



- origin insertion Relation
- Action → elivat Hyoid
→ depress mand.
- Embryology:
ant pelly → From 1st ph. arch
Post pelly → From 2nd ph. arch

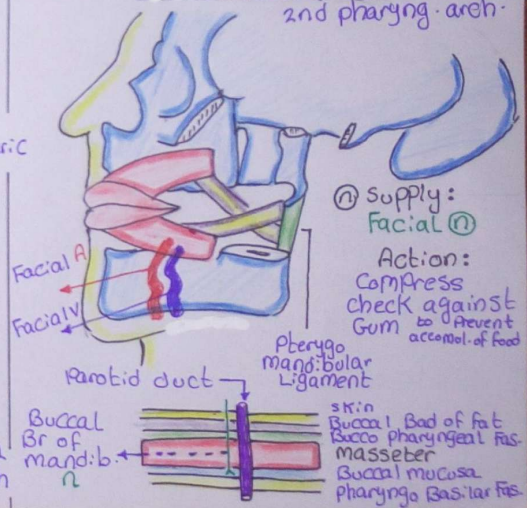
masseter



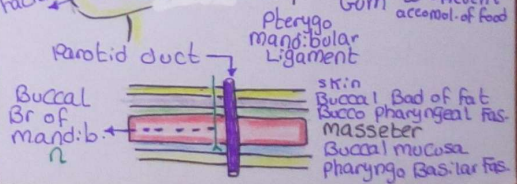
- ORIGIN Insertion
- ① Supply Action
- Embryolog: Derived From 1st pharyng.

Buccinator

2nd pharyng. arch.



- ① supply: Facial ①
- Action: Compress cheek against gum to prevent accom. of food

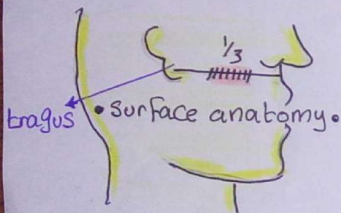


Parotid D.

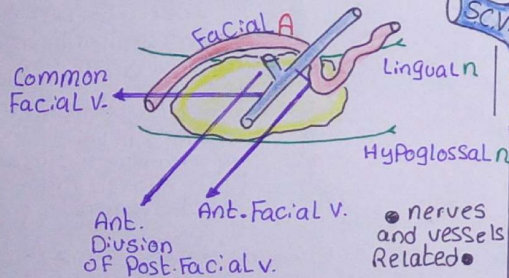
- Structure Pierced By it:

 - 1 Buccopharyngeal Fascia.
 - 2 Buccal Pad of fat.
 - 3 Buccinator
 - 4 Buccal mucosa.

- termination: vestibule of mouth opposite upper second [2nd] molar.



Submandib. G.

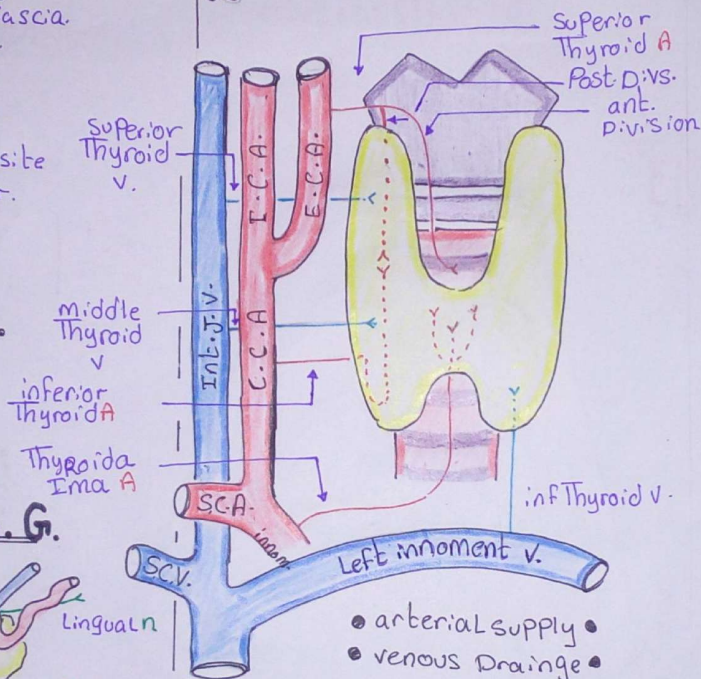


- n. supply:

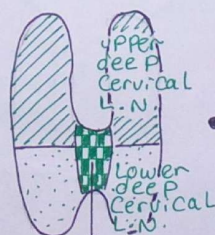
 - sensory → Lingual n.
 - Parasymp. → chorda tympani n.
 - Sympathet. → plexus ECA

14

Thyroid G.

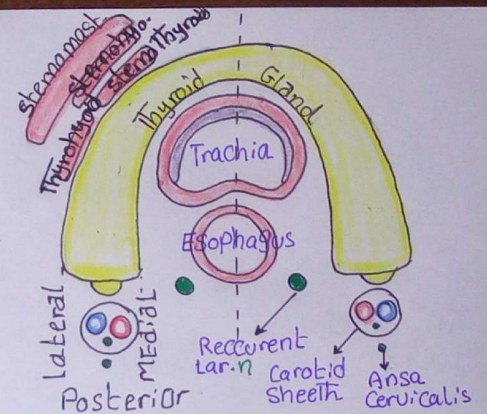


- arterial supply
- venous drainage



- Lymphatics

prelaryngeal + pretracheal L.N.



N.B:

- medial Relation

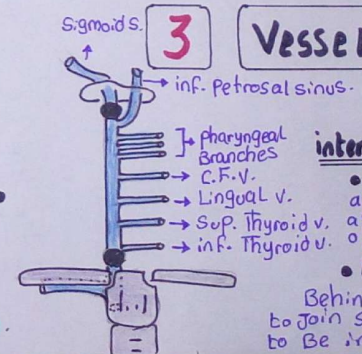
 - upper → pharynx
 - middle → cricothyroid
 - Lower → كها بالقرص

- Fascia Related: pretracheal fascia.

Sigmoid.

3

Vessels

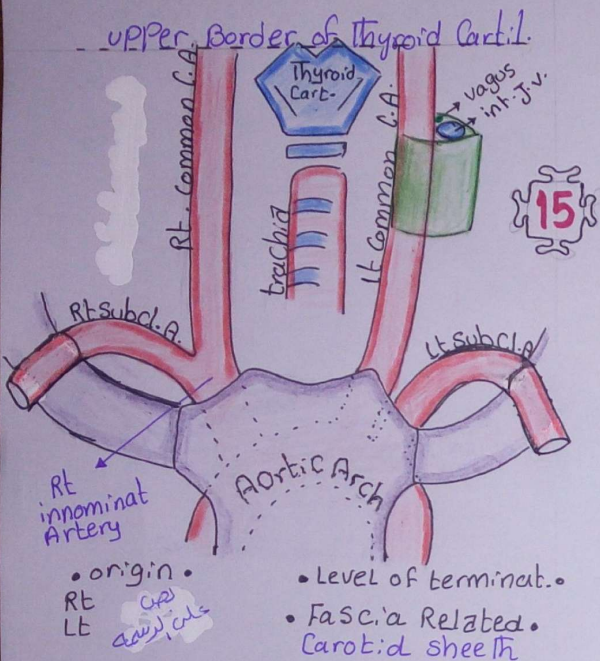


internal Jug. v.

- Beginning: at Jugular F. as combination of Sigmoid.
- termination: Behind manib. st. to join subclavian v. to be innominate v.

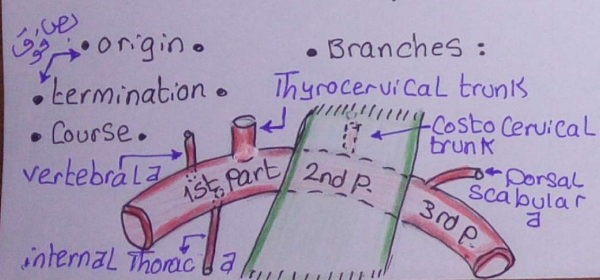
Common Carotid A.

upper Border of Thyroid Cartil.

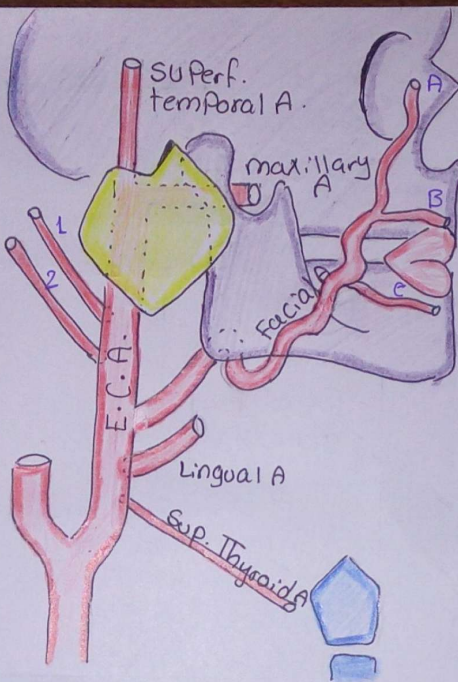


- origin: Rt. Subcl. A. / Lt. Subcl. A.
- Level of terminat.: Upper border of Thyroid Cartil.
- Fascia Related: Carotid sheath

Subclavian A.



- origin: Rt. Subcl. A. / Lt. Subcl. A.
- Termination: Upper border of Thyroid Cartil.
- Course: 1st part, 2nd part, 3rd part
- Branches: Thyrocervical trunk, Costo Cervical trunk, Dorsal Scapular A.



External Carotid A.

- Beginning: Common Carotid Artery
- Termination: Upper border of Thyroid Cartil.
- Branches:
 1. Post. Auricular A.
 2. occipital A.
- Gland related: Parotid Gland

Facial A.

- origin: Ant. aspect of E.C.A.

- How it enter Face:

Curves around lower Border of mandible and piercing: Deep Fascia of neck to Enter Face.

- Branches in Face:
 - A- lateral nasal A.
 - B- superior lipal A.
 - C- inferior lipal A.

Internal Carotid A.

- Beginning: like External Carotid
- Termination: one of two terminal Br of CCA at level of upper Border of Thy.C.
- termination: in cranial cavity lateral to optic chiasma By dividing into:
 - ant. Cerebral A.
 - Post. Cerebral A.
- mention 4 parts:
 - Cervical.
 - Intra petrosal.
 - Intra Cranial.
 - Intra Cavern.

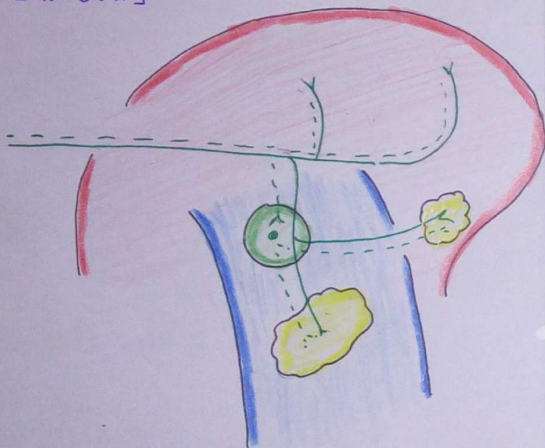
Lingual n

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• متعلق فوق ← submandib. G

• Distribution:

- ant $\frac{2}{3}$ of tongue $\swarrow$ G-sensation taste [chordate.]
- sensory to $\swarrow$ submand. G
- Paras. $\swarrow$ SMG sublingual G
- [chordate.]



Hypoglossal n

• origin:

ant. lat. sulcus of medulla.

• muscle supplied by it:

- All tongue muscles [extensor]

(Except)

Platoglossal

- Thyrohyoid
- geniohyoid

لوفكر يعني دا اللي بيقي متعلق من
submandibular Gland
بس من تحت.

Vagus X

• origin:

Post. Lateral sulcus of medulla.

• 2 Branches in neck:

- Pharyngeal n.
- sup. laryngeal n.

Right vagus $\rightarrow$ يسار لو هو فالج ال
لوزم لايمن تكسبه

- superior laryngeal.

آخر حاجه هـ ال Sagittal section
ولصراحة هـ هـ وقت كبير من رسي
يمكن تدفع على Youtube
وتكتب:

Dr Remon Practical
وتفتح هـ اول ليريقه

14:25

تحت الحجاب

دعواتي 😊

Spinal part of Accessory n

sternoma $\rightarrow$ لو عايز تفتحش فكله بيقي ورا

- muscle supplied by it:
- sternomastoid.
- Trapezius.